

Claims

- [c1] 1. A bicycle electrical control circuit that provides power and control signals to a plurality of bicycle components, wherein the circuit comprises:
a power circuit that provides a power signal for the plurality of bicycle components;
a control circuit that provides a control signal that controls at least one of the plurality of bicycle components;
and
a power stabilizing circuit coupled to the power circuit, wherein the power stabilizing circuit stabilizes power provided from the power signal to at least one of the plurality of bicycle components.
- [c2] 2. The circuit according to claim 1 wherein the control signal has a pulse component.
- [c3] 3. The circuit according to claim 2 wherein the control signal has an ON component and an OFF component.
- [c4] 4. The circuit according to claim 1 wherein the power stabilizing circuit stabilizes a voltage provided to the at least one of the plurality of bicycle components.

- [c5] 5. The circuit according to claim 1 wherein the power stabilizing circuit comprises a capacitor.
- [c6] 6. The circuit according to claim 5 wherein the power stabilizing circuit further comprises a diode coupled to prevent reverse current to the power circuit.
- [c7] 7. The circuit according to claim 1 wherein the power circuit is structured to provide power derived from an alternating current source.
- [c8] 8. The circuit according to claim 7 wherein the power circuit is structured to provide power from a dynamo hub mounted to one of a front wheel or a rear wheel of the bicycle.
- [c9] 9. The circuit according to claim 1 wherein the power circuit is structured to provide power derived from a direct current source.
- [c10] 10. The circuit according to claim 9 wherein the power circuit is structured to provide power derived from a battery.
- [c11] 11. The circuit according to claim 1 wherein the power circuit and the control circuit together comprise a power/control circuit that provides a composite signal having the power signal and the control signal.

- [c12] 12. The circuit according to claim 11 wherein the control signal has a pulse component.
- [c13] 13. The circuit according to claim 12 wherein the control signal has an ON component and an OFF component.
- [c14] 14. The circuit according to claim 13 wherein the plurality of bicycle components comprises a first electrical component and a second electrical component, wherein the first electrical component is controlled by the control signal, and wherein the second electrical component is not controlled by the control signal.
- [c15] 15. The circuit according to claim 14 wherein the power stabilizing circuit stabilizes the power provided from the power signal to the second electrical component.
- [c16] 16. The circuit according to claim 15 wherein the first electrical component comprises a liquid crystal display component structured to display various data, and wherein the second electrical component comprises a backlight that illuminates the liquid crystal display component.
- [c17] 17. The circuit according to claim 15 wherein the first electrical component comprises a gear shift driving component that drives a gear shift mechanism having a plu-

rality of gear ratios.

- [c18] 18. The circuit according to claim 17 wherein the second electrical component comprises a light.
- [c19] 19. The circuit according to claim 15 wherein the power stabilizing circuit stabilizes a voltage provided to the second component.
- [c20] 20. The circuit according to claim 19 wherein the power stabilizing circuit comprises a power storage device coupled in parallel with the second electrical component.
- [c21] 21. The circuit according to claim 20 wherein the power storage device comprises a capacitor.
- [c22] 22. The circuit according to claim 20 wherein the power stabilizing circuit further comprises a diode coupled to prevent reverse current to the power/control circuit.